

the RARS *Exciter*

Raleigh Amateur Radio Society



Worldwide Friendship

September, 2003 Number 389



CARY HAMFEST JULY 19, 2003



The Cary Hamfest looked pretty good this year. All the inside tables were filled, and the crowd was thick enough that you had to squeeze through the aisles at times. (More info inside)

The Exciter

The ***Exciter*** is the monthly newsletter of the Raleigh Amateur Radio Society. It is available in both printed and electronic form. The printed version is mailed to members just before each club meeting. The electronic form, in Adobe Acrobat PDF format, is e-mailed about a week earlier.

We solicit both articles and advertising. The deadline for submissions is first Friday of the month or Friday after the monthly meeting. Contact the Editor.

The views contained in the ***Exciter*** are those of the individual authors, and are not necessarily the views of the Editor, or the Raleigh Amateur Radio Society.

The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the Amateur Radio community in the greater Triangle area. In 1999, we incorporated a new RARS, and obtained 501(c)(3) Non-Profit tax status.

The objectives of the club are to promote worldwide friend-ship through Amateur Radio; to be of public service by providing radio communications in times of disaster, emergency, or civic need; to educate members in radio technique; and to provide training classes to assist in obtaining Amateur Radio licenses.

Anyone interested in Amateur Radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18.00 per year (from July 1 through June 30). Additional immediate family members pay \$5.00 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12.00 per year. Dues for non-licensed Associate members are \$9.00 per year.

Applications for membership may be obtained from the treasurer, or the RARS web site (www.rars.org).

Officers

President: Bernard Blackmon W4BRB
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Vice-President: Andy Peterson NI4S
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INFO

RARS Repeaters in Raleigh:
145.13
146.64
224.64
444.525 (88.5 PL)

WEB SITE <http://www.rars.org>

NEXT RARS MEETING: September 2, 2003 Old DX, New Tricks

RALEIGH AMATEUR RADIO SOCIETY MEETINGS

Date: Every first Tuesday of the Month

Location: Forest Hills Baptist Church, at Dixie Trail and Clark Avenue, in Raleigh

Time: 7:30pm. Folks start showing up a bit before 7 to chat, brag and eat donuts.

VE TESTING: The RARS VEs will accept walk-in testing which is on even months except April and December. Please bring a photo ID, your original current license if you have one, and any CSEs you need for credit. Check into the 8:00 pm net every night on the 146.64 repeater or www.rars.org for information.

THIS IS YOUR LAST EXCITER IF DUES HAVE NOT BEEN PAID

RARS MEMBERSHIP DUES DUE
Membership renewals can be paid at RARS meetings, paid on-line, or mailed to the RARS treasurer. Mail To:
Greg Seamster
RARS Treasurer
1405 Leanne Court
Raleigh, NC 27606
RARS now accepts credit card payments online for new members and membership renewals. You can join or renew your membership online using a secure credit card payment process. See the RARS website www.rars.org for more information to sign up for RARS membership or renew 1, 2, or 3 years

THE RARS AUCTION WILL BE OCTOBER 7, 2003

The RARS Auction, traditionally held in November, is being moved to October. That's because the Forest Hills Baptist Church is used as a polling place on the first Tuesday in November, and we have to move the meeting upstairs, making it more difficult to bring auction items into the building. So plan to sort through your treasures a month early.

FIELD DAY RESULTS by Neal N4HAF Chairman

Once again, I want to thank Jim and Beth Carroll for hosting our operation. Also, thanks to Vianne Pendleton (XYL of W4AUV). for coordinating the Saturday evening BBQ and the Sunday Brunch.

Here are the results for our 7A effort: 3,062 contacts 9,412 total points (includes bonus points)

Here is a break down of the contacts by transmitter (7)

BAND/MODE	CONTACTS	BAND	CAPTAIN
160M/80M	CW/SSB	142	WA9SZL
15M/20M/80M/15M	Digital	166	W4TME
40M CW		886	N4HAF
40M SSB		1115	WA4BPJ
20M SSB		713	N4VQT
10M SSB Band		closed	W2BYV
6M/70CM SSB		40	K4SAN



This was a very good effort considering the condition of the bands above 40 Meters, and it should place us in the top 4 or 5. Thanks to all of the Band Captains for an excellent job of organizing their stations , and also to those who operated. (49 total participants)

Photo by Neal N4HAF

146.88 145.39, 147.105, & 147.135
Repeaters are supported by PCRN
if you would like to donate please
make checks to:
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PO Box 12734
Raleigh, NC 27605

More info on PCRN:
<http://www.pcrn.net>

Lowest Cost Current Baluns

By Larry Young K4LXV

- A. For 1:1 HF (2-30 Mhz). Use ferrite beads, of #73 material slipped over the outside of the coaxial cable at the antenna feedpoint. The beads can be secured with cable ties to hold in place over the coax cable. No covering is necessary.
1. Use 50 each, 0.38"OD x 0.197"ID x 0.190 thk, Amidon P/N FB-73-2401 or CWS Bytemark P/N SB-2401-73 or The Wireman P/N FB 73-2401 beads for smaller cables such as RG 58, RG 142, or RG 400 with 0.195" OD.
 2. Use 12 ea. 1.020" OD x 0.505 ID x 0.825 thk. Amidon P/N FB-77-1024 or CWS Bytemark P/N SB-1024-77 beads when RG/8 or RG/213 cables with 0.405" OD is used.
- B. If operations at 14 to 30 Mhz only are anticipated, such as a triband beam, then fewer beads (25) or (6) depending on coax diameter can most likely be used.
- C. For VHF, use # 43 or # 61 ferrite material, and 12 or 3 beads depending on coax size.
- D. Bead prices: At my last price check, the smaller beads were \$4.50 for 12 each from Amidon and CWS, and \$.25 each or (\$.18 each for 50 minimum) from The Wireman.
1. The large beads are 12 for \$5.95 from Electronics Plus, San Rafael Ca. (www.electronicplus.com), \$2.00 each from Amidon and \$1.50 each from CWS. The Wireman offers Clamp on Ferrites, of #43 material PN # 916 for RG/8 or RG/213 for \$4.00 each, and smaller beads of #43 material for \$.25 each.
- E. If a 1:4 balun is desired, twice as many beads are required.
1. Two pieces of 95 Ohm cable such as RG 62A/U, sufficiently long to hold 50 beads each must be used. For the 50 Ohm input, the center conductors and braids are connected in parallel. At the output end, one center and braid are connected together, with the remaining center and braid used as the times 4 output .
 2. As this configuration is not very strong mechanically, some type of housing is usually required. PVC pipe with end caps as a housing is very low in cost, provides mechanical strength and weather proofing. A coaxial connector may be put at the input end, and braided wire or screws put at the opposite end.

RARS NEW MEMBERS

JULY 2003

We would like to welcome our new members to RARS. Thank you for considering us for your amateur radio club.

Suzanne KI4ATA
Jim KD4OLX

Charles Irving, Jr
Kathleen KA2SBC

MY SHACK

Jim Pierpoint W4CAD



Antennas

Homebrew fiberglass cross boom with custom antenna and mast mounts.

Homebrew mast (combination steel tubing and fiberglass tubing).

Cushcraft 13B2 2-meter antenna, 13 elements, rated 15.8dbi gain

Cushcraft 719B 440MHz antenna, 19 elements, rated 15.5dbi gain

HF (shortwave) equipment list:

Kenwood TS-950-SD High Frequency transceiver.

Kenwood SM-230 station monitor and band scope.

MFJ Versa-Tuner-5.

MFJ-SWR/wattmeter.

MFJ-artificial ground.

Clear Speech Base noise filter with adaptive filtering.

MFJ "low pass filter".

Homebrew power distribution system.

9913 coax

Homebrew dipoles for 10, 15, and 20 meters

VHF/UHF equipment list:

Several Yaesu and Icom rigs.

MFJ-874 SWR/wattmeter

Homebrew fiberglass cross boom with custom antenna and mast mounts.

Homebrew mast (combination steel tubing and fiberglass tubing).

Cushcraft 13B2 2-meter antenna, 13 elements, rated 15.8dbi gain

Cushcraft 719B 440MHz antenna, 19 elements, rated 15.5dbi gain

Mirage B-510-G amplifier with 22db preamp.

MFJ-4035 power supply rated 30 amps continuous.

Yaesu G-800S rotator.

9913 coax.

Homebrew grounding system.

Several scanners on a Create LPDA.

+++++

I am located in Northern Wake county, exactly at the junction of 3 counties: Wake, Granville, and Franklin. My home is at 510' ASL. I have to be very careful about accidentally opening the Mt. Mitchell repeater while I am on the local GRA 145.19 repeater. I have to keep the Mt. Mitchell repeater in the "null" of my beam. I can easily open Greensboro repeaters, as well as many Eastern repeaters such as Trenton and Grifton, out to perhaps 100 miles or more.

Editors Note: Welcome to the first of occasional features and photos of members' ham shacks. If you're proud of your shack's equipment, send us a photo or description and you might see it in a future issue.

Minutes of the RARS Board Meeting,

Tuesday, June 17, 2003

The RARS board meeting was held at Forest Hills Baptist Church on Tuesday, Jun 17, 2003. Members present were: K4HF, K4HM, KE4PAX, KG4CXR, KG4FIJ, KG4OQA, NI4S, W4BRB, WA2UZO. Total present: 9.

The meeting was called to order by W4BRB at 7:45 PM.

On motion by K4HM, second by KE4PAX, the May 2003 board meeting minutes were approved.

V.P. Report (NI4S): July general meeting will feature a program on MARS. Annual RARS auction has been moved from Nov meeting to Oct meeting.

Treasurer's Report (KE4PAX): There are currently 306 members.

FM Committee: No Report.

Exciter (KG4CXR): August issue is almost completed and will be mailed on Jul 7.

Net Manager (KG4OQA): Nets are going well, with many new check-ins. Net traffic training is increasing. Discussing presenting certificates to active Net Controls.

Webmaster (WA2UZO): Pay Pal is doing well. URL for Solar Activity has been updated.

Membership Services (KG4CXR): Needs current membership list to use for preparing membership cards.

Hamfest (K4HM): General discussion about Hamfest financial report.

Field Day: No formal report but W4BRB reports everything is good to go.

Public Service: No report.

Education (KG4OQA for W4NOT): KG4OQA and K4RLC will serve on a Statewide Training Committee with Bernie Nobles WA4MOK (new SEC), to assess training needs.

VE Team: No report.

Public Service (W4BRB for K1RCB): Nothing significant to report.

ARRL Liaison (K4HF): Five frequencies in the 5 MHz range have been granted to amateur radio. More to come about proper use of these frequencies.

Nominating Committee (K4HF): Will kick off the nomination process at the August meeting.

W4DW/W4RNC Trustee: No report.

Special or Ad Hoc Committees: None.

Unfinished Business:

Camille was accepted to Handi-Ham Camp. Awaiting more information from Dick W8HYD concerning financial costs for her to attend, then will decide how much to donate.

NC State Fair Fundraiser. KE4PAX has not pursued for this year. Removed as future agenda item.

Financial Review. President W4BRB appointed the following to the Financial Review Committee: KE4PAX, KG4OQA, NI4S, AC4ZO, and WA4LAG. KE4PAX will schedule for early July, after the June 30 FY closeout.

KE4PAX report on attendance at IRS class. Still working on formal report.

New Business:

KE4PAX initiated discussion about the possibility of switching RARS financial accounts from Wachovia to another institution for better interest rates. He will research and report back.

Upon motion by KG4FIJ the meeting adjourned at 9:05 PM.

"Weekend Warrior" "Tech Class

By Gary KN4AQ

The summer "weekend warrior" class was a great success.

Mike Murphy WA4BPJ, Dick Bitner W8HYD and I taught the class in two 8-hour sessions, from 9 AM to 6 PM, on two Saturdays, August 2nd and 9th, at our usual classroom in the Nortel Technical Education Center. I also held two introductory classes on the Monday and Tuesday evenings before the first Saturday class. This let students get an idea of what ham radio was about, and pick up the textbook.

Getting the book was important because the students needed to prepare by reading the chapters and reviewing the question pool for half the book before each class. I also recommended that they take on-line practice exams as they studied to track their progress and become familiar with the exam format. Most did that, at least a little. And most said they did some studying, but it was tough covering that much material in just a few days.

This was an experiment in a more concentrated class than the six-week format we've used for years. We would teach a chapter for about 90 minutes, take a short break, and jump into the next chapter. We took an hour break at lunch.

I just divided the "Now You're Talking" text into two sets of five chapters. The first day finished early. We completed the first five chapters by about 4:30 PM. But the material for the second day took longer. We finished on time, by 6 PM, but we had to rush a bit to get there. Next time we'll move one of the chapters to the first day and even things out.

Then we took a "dinner break" (most students used the time to review), and the exam began at 7 PM. VE testers Joe and Liz White (WA4GIR and KO4CK), Cliff Braughton AG4XR and Alan Pitegoff AB4OZ took over the exam session.

The proof of this pudding is in the test session. 9 of 11 passing (including one 11 year old) is pretty good, and we hope the other two try again. We lost some potential students who were not available on these weekends. Others have asked when we'll do the six-week, weekday evening class again, and I've received suggestions for modifying this class (three days instead of two, all day Saturday and Sunday in one weekend, and others). Obviously for the 9 who passed, this format worked, though they told me they were getting pretty tired by the last chapters. I'm waiting to hear some final evaluations now that they've passed.

One thing they did not get was a "Tune In the World Night" experience. Several students asked for help choosing radio equipment and getting on the air. I'll help as much as I can, but I hope that some of you out there in the club will pick up this challenge. We do need to make class follow-up a bit of a formal, scheduled opportunity. You know... with a leader! Anyone want to grab this ring and run? We really need to do this, but it's beyond my ability to make time.

(Continued on Page 7)

“Weekend Warrior “ Tech Class (continued from Page 6)

Here is a list of the successful students. I'm particularly pleased to point out the name Mary Jo Littlewood (xyl of Chuck K4HF)!!! Mary Jo has participated in RARS for years (I'd say decades, but I don't want to get into age issues here). She told Chuck that she'd get her license if the club ever offered a concentrated class. Well, we did, and she lived up to her end of the bargain. Look for Mary Jo on the air soon!

Here's a list of students (callsigns pending):

Keith Bugner, Raleigh, Mike Conrad, Chapel Hill, Nathan Conrad, Chapel Hill, Mary Jo Littlewood, Raleigh, Janell Lovelace, Durnam, Jim McRight, Raleigh, Paul Swartz, Cary, Daniel Swartz, Cary, Chuck Yarbrough, Durham

Congratulations to all the students! Thanks to Dick and Mike, and Chuck K4HF who attended each class and contributed his wisdom often, and VE's Joe, Liz, Cliff and Alan.

NET REPORTS FOR JULY, 2003

8:00PM DAILY: RARS Evening Net

Participants 457
Traffic 23/20
Time 727 Minutes
Sessions 31

8:30PM SAT: Tech & Traders Net 9:00PM MON: SWL/SIG

Participants 52
Traffic 1/1
Time 335 Minutes
Sessions 7

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Cary Hamfest Looking Good!

by Gary Pearce KN4AQ

The Cary Hamfest looked pretty good this year. All the inside tables were filled, and the crowd was thick enough that you had to squeeze through the aisles at times. I didn't hear anyone utter the traditional hamfest phrase "it seems a little down from last year."

They did have their troubles. The Cary Community Center site is undergoing a lot of construction - new buildings, a new parking deck - so the usually overcrowded parking lot was cut in half, and there was no place for the outdoor flea market. The club arranged for both across the street, a short walk from the main hamfest. The outdoor flea market was a little smaller than usual, which may have made the indoor space more crowded. The weather was great - it wasn't blistering hot, and it didn't rain.

To encourage new hams to get involved and attend hamfests, the Cary ARC invited hams licensed less than a year to come free. About a dozen new hams took advantage of the offer.

I had a good time, but the best part of the hamfest for me came after I left. I got a call from Herb Lacy W3HL - I won 2nd prize, the Icom T-90 handheld! Herb was kind enough to drop it off.

Next year all that construction will yield more parking space, and the outdoor flea market will be covered, on the ground floor of the deck.



Virginia KG4PFA passed the General Test 100%



Jim W4CAD, Bev N4BEV, Virginia KG4PFA, Robert KG4BDX
Danny K4ITL seated to the left



Hamfest buyers and lookers

Photos by Bev N4BEV

MINUTES OF THE RARS MEETING
Tuesday, August 5, 2003

MINUTES OF THE RARS MEETING, Tuesday, August 5, 2003

The meeting was called to order at 7:35 PM by Vice President Andy Peterson NI4S.

Visitors: Rob Knowles and Jim Connolly.

Treasurer's Report: There are currently 307 members

ANNOUNCEMENTS:

- ♦ Dick Orander KD4ISC spoke about the upcoming MS-150 on Sep 13-14. Volunteers are needed for many open positions.
- ♦ Chuck K4HF announced that the RARS auction will be at the October meeting this year, to avoid the election day conflicts of past November meetings.
- ♦ Andy N4IS briefed on recent ARRL news... 40-meter realignment; recent petition filed to eliminate code requirement; new 5 MHz frequencies on the 60-meter band.
- ♦ Gary KN4AQ announced the Weekend Warrior Technician Class is currently underway and going well.

PROGRAM:

Gary KN4AQ spoke about, and showed a video of his recent trip to the Dayton Hamvention.

Door Prizes won by: KD4SLQ, KG4RMT

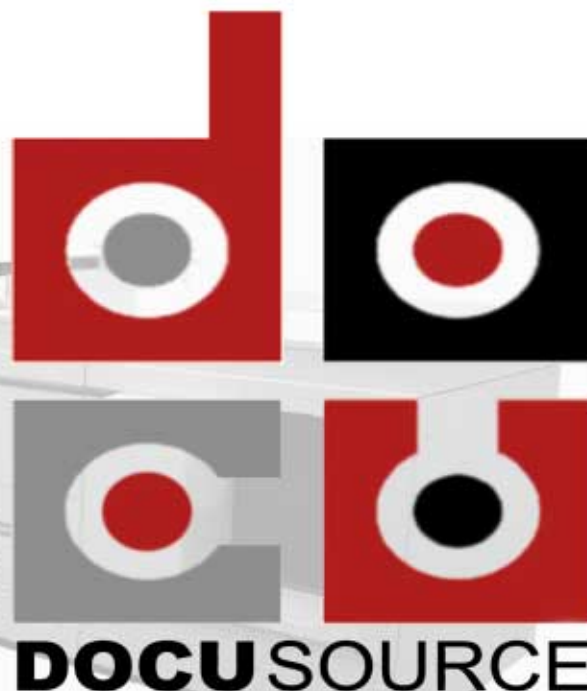
Meeting adjourned at 8:35 PM.

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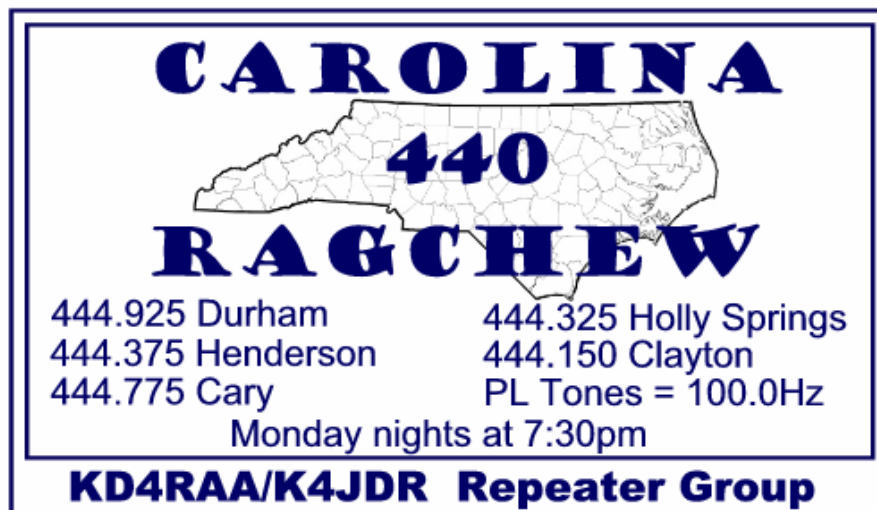
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relax; **docu**source it.



We are delighted to announce the start-up of the CAROLINA 440 RAGCHEW net on the KD4RAA/K4JDR full time linked repeater system. The net will be held at 7:30 PM every Monday night, beginning 07-28-03.

In addition to a ragchew format, we will occasionally feature “trivia” and “repeater-hopping” to other 440 repeaters. Amateur radio clubs may announce club events and other nets during the announcement portion of the CAROLINA 440 RAGCHEW net. A group of skilled, friendly net control operators from multiple counties are lined up for well-run nets. To help us broaden our bases we encourage you to volunteer as a net control operator.

This net uses the KD4RAA and K4JDR full time linked repeater system. These are the frequencies that you can use to access the net:

444.925+	Durham	PI=100.0
444.775+	Cary	PI=100.0
444.325+	Holly Springs	PI=100.0
444.375+	Henderson	PI=100.0
444.150+	Clayton	PI=100.0
441.725+	Raleigh	PI=100.0 “backbone” (hub)

We would recommend that you program in all of these frequencies, and then switch off to the one that works best for your location.

KG4PFA, Virginia, is the Net Manager.
Email: kg4pfa@aol.com Phone: (919) 469-8555

SEE YOU ON THE RADIO

**The Central Carolina
Skywarn Net Meets
Tuesdays at 9:15 PM
on 146.88 Repeater**

Remember to give damage reports AFTER
the storms as well as DURING the storms.



HF, VHF, Internet Linked for Hurricane Net

By Denyse KG4CXR

One of the most ambitious efforts in linking repeaters took place on July 22nd at 7:30pm with the Tar Heel Emergency Net as the host of a presentation of Jeff Orrock, Warning Coordinator Meteorologist for the National Weather Service in Raleigh. He presented a program on Hurricane Season 2003.

The link system included HF, UHF, VHF, IRLP and Echolink all connected. There was no trouble till the very end when the hub dropped. The HF side had 69 check-ins and the IRLP had 31, a feat that will be tried again in the future. Thank you to all who participated in the linked event.

Congratulations goes to:

Danny Hampton K4ITL, of Raleigh, North Carolina is the recipient of the ARRL 2002 Technical Service Award. Hampton is the architect of the Piedmont Coastal Repeater Network, established in the early 1970s. Today the network sports more than 40 machines in North Carolina.



Join Us At the RARS Dinner



**On 4th Tuesday, 6:30 pm at
Hard Wok Buffet on Glenwood Ave.**

HAMFEST CALENDAR

August 30-31	SHELBY, NC
September 20-21	Virginia Beach, VA Wesleyan College
October 12 *	Maysville, NC
October 25	Sumter, SC
November 8	Myrtle Beach, SC (new location)
NOVEMBER 16	BENSON, NC
February 8	Richmond, VA
February 22	Elkin, NC

* Date is not confirmed

Courtesy of the SERA Repeater Journal



RARS SUMMER “WEEKEND WARRIOR” TECH CLASS



Dick W8HYD teaches class

Photo by Gary KN4AQ

Our first summer “weekend warrior” Tech license class was a great success. After attending class on two consecutive (long) Saturdays, all 11 students passed their Tech license test. Ten students passed the test at the VE session following the second day of class. One jumped the gun and passed his test at the RARS meeting after the first class!

Continuation of the class story on page 6.